

Appendix E. Summary of Biological Indicators and Water Quality Conditions for Tidal Wetland Sites behind Water Control Structures (K. Wasson, unpublished data). The numbers in bold indicate potential opportunities to improve the conditions of these estuarine habitats.

Summary of Ecological Indicators of Tidal Restriction (August 1, 2006)								
site	tidal range	salinity max (ppt)	nitrate max (mg/L as NO3)	number of native species			species of concern	percent of 1931 marsh extent
				birds	fish	inverts		
North Marsh	4.5	59	13	10	5	6	Brown pelican	53
Estrada Marsh	0.5				4			72
Strawberry North Lagoon	1.5				4			37
Whistlestop Lagoon	16	36	6	4	8	7	Sea otter, Olympia oyster	
Hidden Pond	22.5			0	5	3		
South Azevedo	0	55	12	1	5	3	Tryonia snail	83
Middle Azevedo	0	85	8	3	4	1		65
North Azevedo	46	37	5	2		9	Olympia oyster	61
Porter Marsh	0.5	35	90	4	2	4	Tryonia snail	
Lower Moro Cojo	6	34	37	5	4	3	Tidewater goby, Tryonia snail	
Moro Cojo Railroad	0			1		0		
Struve Pond	1	56	18	3	4	2	Tidewater goby, Tryonia snail	29
Old Mouth (lower Bennett)	44	35	10	4	6	7	Sea otter, Brown pelican	
Packard Pond	0				4			
<i>Average from adjacent full exchange sites</i>	<i>100</i>	<i>35</i>	<i>30</i>	<i>6.2</i>	<i>4.6</i>	<i>8.6</i>	<i>Sea otter, Brown pelican, Olympia oyster, Tryonia snail</i>	
	potential concern if <2%	potential concern if >50 ppt	potential concern if >10 mg/L					
<p>tidal range: as measured by ESNERR staff at various sites on Dec 12, 2005, a spring tide (true range is likely to vary somewhat from this value); expressed as % of full exchange (obtained from SWMP & LOBO data)</p> <p>salinity and nitrate max: annual maximum averaged over past 5 years from ESNERR monthly volunteer monitoring program</p> <p>marsh: % of 1931 marsh aerial extent (salt, brackish and freshwater marsh with >25% cover combined), present in 2003</p> <p>number of species: from survey by ESNERR staff in 2005; numbers are result of rapid assessment, not comprehensive site surveys; search effort was consistent across these sites and adjacent, shallow full exchange sites</p> <p>blanks in all cases mean no data were available for this parameter</p>								